APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,587	02/27/2002	Hitoshi Ebihara	SCEISZ 3.0-124	8684

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EXAMINER
CHEN, PO WEI

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/085,587	EBIHARA, HITOSHI
	Examiner	Art Unit
	Po-Wei (Dennis) Chen	2676

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 April 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-4 6-7,10,13,15 and 19-42* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-4,6-7,10,13,15 and 19-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

In response to an Amendment received on April 23, 2004. This action is final.

Claims 2-4, 6-7, 10, 13, 15 and 19-42 are pending in this application. Claims 19, 24, 29 and 34-

42 are independent claims.

The present title of the invention is "Information Processing System, Integrated Information

Processing System, Method for Calculating Execution Load, and Computer Program".

The Group Art Unit of the Examiner case is now 2676. Please use the proper Art Unit number to

help us serve you better.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 2-4, 10, 15, 19, 21, 24, 29, 31 and 34-42 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Lewis et al. (US 6,434,714; refer to as Lewis herein) in view of Bishop

et al. (US 6,049,798; refer to as Bishop herein).

3.   Regarding claim 19, Lewis disclose a method for analyzing performance data of

application programs comprising:

An information processing system (lines 1-8 of abstract);

A processor operable to carry out a plurality of processes (lines 5-16 of column 5 and

Fig. 2; each thread corresponds to a process);

A signal producing device operable to produce an execution enabling signal that causes said processor arrangement to concurrently initiate the plurality of processes (lines 55-66 of column 4 and lines 17-35 of column 5 and Fig. 4; the system includes operating system to execute the program corresponding the producing an execution enabling signal);

A load determination arrangement operable to begin determination of a plurality of execution load values each associated with a specific one of the plurality of processes in response to the execution enabling signal; said processor arrangement being further operable to cause said load determination arrangement to conclude the determination of the execution load value associated with the completed process, said load determination arrangement thereby determining a specific execution load value for each of a plurality of completed processes (lines 19-54 of column 4 and line 5 of column 5 to line 55 of column 6 and Fig. 2-4; the performance analyzer corresponds to load determination arrangement that it calculate the processing time to complete each thread process).

Lewis does not disclose produce an execution termination signal whenever the process is completed. Bishop disclose a real time internal resource monitor for data processing system utilizing the method (lines 33-45 of column 23 and lines 14-16 of column 24; the system analyzing the performance data such as processor resource utilization (execution load) in accordance of the start and end event signals). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the teaching of Bishop to provide a way to notify the system whenever a process is completed in order to calculate resource utilization for a efficient way of monitoring system (lines 30-33 of column 3).

4.   Regarding claim 2, Lewis disclose a method for analyzing performance data of

application programs comprising:

A presentation unit operable to provide real-time presentation of at least one of the

determined execution load values (line 34 of column 5 to line 41 of column 6 and Fig. 4; the

processing time corresponds to the execution load values).

Lewis does not disclose real-time presentation. Bishop disclose a real time internal

resource monitor for data processing system utilizing the method (lines 1-20 of abstract and Fig.

6). It would have been obvious to one of ordinary skill in the art at the time of invention to

modify Lewis by substituting the presentation method of Bishop for the presentation method of

Lewis because Bishop teaches by utilizing the presentation method will provide a efficient

system being monitored (lines 16-20 of abstract).

5.   Regarding claim 3, Lewis does not disclose clears a previously determined execution

load values in response to the execution enabling signal prior to the determination of the

execution load values.

Bishop disclose a real time internal resource monitor for data processing system utilizing

the method (lines 46-63 of column 9 and Fig. 9; it is noted that the resource utilization is being

measured by the busy count and which is reset for a new event in order to get the total count.

Thus, this functions as clears a previously determined load values). It would have been obvious

to one of ordinary skill in the art at the time of invention to utilize the teaching of Bishop to

provide a way to clear old determined values in order to calculate new resource utilization for an

efficient way of monitoring system (lines 30-33 of column 3, Bishop).

6.   Regarding claim 4, Lewis does not disclose determining the execution load values

associated with the completed process by counting a number of clock signals from the execution

enabling signal to the execution termination signal associated with the completed process (lines

46-63 of column 9 and lines 4-16 of column 24 and Fig. 9; the load determination unit (Fig. 9)

determines the resource utilization (execution load) by counting the busy signals received during

the time of the event was executed. The counting of busy signals during time interval functions

as clock signals). It would have been obvious to one of ordinary skill in the art at the time of

invention to utilize the teaching of Bishop to provide a way to calculate the processing time in

order to calculate resource utilization for an efficient way of monitoring system (lines 30-33 of

column 3, Bishop).

7.   Regarding claim 21, Lewis disclose a method for analyzing performance data of

application programs comprising:

        Said processor arrangement includes a plurality of processor units each operable to carry

out a respective one of the plurality of processes (lines 5-16 of column 5 and Fig. 2).

8.   Regarding claims 10, 24 and 26, statements presented above, with respect to claims 3, 19

and 21 are incorporated herein.

9.   Regarding claim 29, statements presented above, with respect to claim 19 are

incorporated herein. Furthermore, while claim recites placing execution termination signal in the

first state and second state to cause load determination arrangement to conclude the

determination of the execution load value. It is clear that the end event signal corresponds to the

execution termination signal can be considered as in first state when it's not yet executed, and as

in second state when it's executed to indicated the completion of the event or process (lines 33-45 of column 23 and lines 14-16 of column 24).

10.   Regarding claim 31, statements presented above, with respect to claim 21 are incorporated herein.

11.   Regarding claim 34, statements presented above, with respect to claims 2 and 19 are incorporated herein.

12.   Regarding claim 15, Lewis disclose a method for analyzing performance data of application programs comprising:

Plurality of information processing systems are disposed in a common housing, said presentation unit being disposed on a surface of said housing and including at least one display for each of said information processing systems (lines 5-16 of column 5 and Fig. 1-4; each thread process can be handle by a corresponding processor thus correspond the different information processing system. While claim recites housing, the term is broad enough to include the system disclosed by Lewis which is being set up as a single system and is being arranged in accordance of Fig. 1. While Lewis does not specifically recite the presentation unit being arranged on a front surface, it would have been obvious matter of design choice to modify Lewis by having the presentation unit arranged on a front surface, since applicant has not disclose having the presentation unit arranged on a front surface solves any stated problem and it appears that the system would perform equally well to arrange the placement of the unit anywhere the user desired to serve its function).

13.   Regarding claim 35, statements presented above, with respect to claims 2 and 19 are incorporated herein. Furthermore, it is noted each thread process can be handle by a

corresponding processor thus correspond the different information processing system (lines 5-16 of column 5, Lewis).

14.   Regarding claim 36, statements presented above, with respect to claims 2 and 29 are incorporated herein. Furthermore, it is noted each thread process can be handle by a corresponding processor thus correspond the different information processing system (lines 5-16 of column 5, Lewis).

15.   Regarding claims 37-38 and 40-41, statements presented above, with respect to claim 19 are incorporated herein. While claim recites periodically, the term is broad enough to include when user initialize the execution of the program (lines 28-41 of column 4).

16.   Regarding claims 39 and 42, statements presented above, with respect to claims 29 are incorporated herein.

17.   Claim 6-7, 23, 28 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al. (US 6,434,714; refer to as Lewis herein) and Bishop et al. (US 6,049,798; refer to as Bishop herein) as applied to claims 19, 24 and 29 above, and further in view of Bhatt et al. (US 6,097,399; refer to as Bhatt).

18.   Regarding claims 6 and 7, the combination of Lewis and Bishop does not disclose the presentation unit includes a plurality of light-emitting components, the number of said light-emitting components that are lit being based on the determined execution load value; presentation unit includes a light-emitting component capable of emitting light of different colors, the color of the light emitted being based on the determined execution load value. Bhatt discloses a display of visual data utilizing such display (lines 13-36 of column 12 and Fig. 6-7; while claim recites plurality of light-emitting components, the term is broad enough to include

the plurality of data items each represented by a light controlled square. And each light control square varies in colors and/or shades with the measurement of the processor load. Also, while claim recites light-emitting components are lit, it is noted that by having color such as black, the particular area corresponds to not lit on the display). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Bhatt to provide the user a better comprehensive display of data in a more accurate and/or efficient manner (lines 12-18 of column 1, Bhatt). Also, Lewis, Bishop and Bhatt are directed to displaying processor utilization data. By using the display disclosed by Bhatt is only a matter of substituting a more specific type of display in place of the one disclosed by Lewis.

19.   Regarding claim 23, Lewis does not disclose an averaging unit operable to determine an average of the determined execution load values. Bhatt discloses a display of visual data utilizing the averaging unit (lines 26-36 of column 12; while claim recites averaging unit, it is clear that the system corresponds to a unit by calculating the average of load values). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Bhatt to provide the user a better comprehensive display of data in a more accurate and/or efficient manner (lines 12-18 of column 1, Bhatt).

20.   Regarding claims 28 and 33, statements presented above, with respect to claim 23 are incorporated herein.

21.   Claims 20, 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al. (US 6,434,714; refer to as Lewis herein) and Bishop et al. (US 6,049,798; refer to as Bishop herein) as applied to claims 19, 24 and 29 above, and further in view of Horvitz et al. (US 6,232,974; refer to as Horvitz herein).

22.   Regarding claim 20, Lewis does not disclose the processes are selected from the group

consisting of processes for processing image data, processes for processing audio data and

processes for processing multimedia data. Horvitz discloses a method of allocating

computational resources to components utilizing those data (lines 8-15 of column 1). It would

have been obvious to one of ordinary skill in the art at the time of invention to utilize the

teaching of Horvitz to provide a way of displaying different types of data in a resource

monitoring system such as one disclosed by Lewis to give user a more versatile system.

23.   Regarding claims 25 and 30, statements presented above, with respect to claim 20 are

incorporated herein.

24.   Claims 22, 27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lewis et al. (US 6,434,714; refer to as Lewis herein) and Bishop et al. (US 6,049,798; refer to as

Bishop herein) as applied to claims 19, 24 and 29 above, and further in view of Morozumi (US

6,570,571).

25.   Regarding claim 22, Lewis does not disclose a plurality of load determination units each

associated with a specific one of said plurality of processor units to determined the execution

load value of the process carried out by its associated processor unit. Morozumi discloses a

image processing method for efficient distribution of image processing to plurality of graphics

processors utilizing the load determination units (lines 39-59 of column 2 and Fig. 1-2; each

geometry engine corresponds to different processor unit which has its own load calculator). It

would have been obvious to one of ordinary skill in the art at the time of invention to utilize the

teaching of Morozumi to provide a way to preventing deterioration of image processing

performance by using the calculated load values in different processors (lines 46-58 of column 1,

Morozumi).

26.   Regarding claims 27 and 32, statements presented above, with respect to claim 22 are

incorporated herein.

Response to Arguments

27.   Applicant's arguments with respect to claims 2-4, 6-7, 10, 13, 15 and 19-42 have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

28.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this
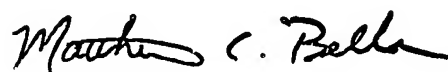
final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Po-Wei (Dennis) Chen whose telephone number is (703) 305-

8365. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matthew C Bella can be reached on (703) 308-6829. The fax phone number for the

organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

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Po-Wei (Dennis) Chen
Examiner
Art Unit 2676

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Po-Wei (Dennis) Chen
July 12, 2004

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
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